

STATUS OF THE CLAIMS

The status of the claims of the present application stands as follows:

1. **(Original)** A controlled phase locked loop system, comprising:
  - a) an oscillator responsive to a control parameter;
  - b) a measurement device for measuring said control parameter and outputting a comparison indicator; and
  - c) a controller operatively connected to said oscillator and said measurement device and adapted for receiving a plurality of operating parameters and adapting the controlled phase lock loop system as a function of said operating parameters and/or comparison indicator to substantially center said control parameter to a pre-selected value.
2. **(Original)** A controlled phase locked loop system according to claim 1, wherein said plurality of operating parameters includes environmental parameters.
3. **(Original)** A controlled phase locked loop system according to claim 1, wherein said oscillator has a topology and said controller dynamically changes said topology.
4. **(Original)** A controlled phase locked loop system according to claim 3, wherein said oscillator is a multi-stage oscillator having a plurality of stage modes and said controller changes the topology at least in part by changing said oscillator among said plurality of stage modes.
5. **(Original)** A controlled phase locked loop system according to claim 1, further comprising a power-on-reset history buffer for storing a subset of said plurality of operating parameters, said controller utilizing said subset during a warm start.
6. **(Original)** A controlled phase locked loop system according to claim 1, further comprising a loop filter responsive to said controller.
7. **(Original)** A controlled phase locked loop system according to claim 1, further comprising a charge pump responsive to said controller.

8. **(Original)** A controlled phase locked loop system according to claim 1, wherein said oscillator is a voltage controlled oscillator and said control parameter is voltage.
9. **(Original)** A controlled phase locked loop system according to claim 1, further comprising at least one of an input divider, an output divider and a feedback divider each responsive to said controller.
10. **(Currently amended)** A method of controlling a phase locked loop having a setup, a topology and an oscillator controlled using a control parameter, the phase locked loop operable at a plurality of target frequencies, comprising the steps of:
  - a) varying the setup of the phase locked loop as a function of a plurality of operating parameters so as to adjust the topology to achieve a desirable topology for each of the plurality of target frequencies; and
  - said desirable topology substantially centering the control parameter to a pre-selected value.
11. **(Original)** A method according to claim 10, wherein the oscillator is responsive to a loop filter, the method further comprising the step of controlling the loop filter as a function of said plurality of operating parameters.
12. **(Original)** A method according to claim 10, wherein said plurality of operating parameters includes environmental parameters, the method further comprising, prior to step a, the step of collecting said environmental parameters.
13. **(Original)** A method according to claim 10, wherein step a includes reading at least some of said plurality of parameters from a power-on-reset history buffer.
14. **(Original)** A method according to claim 10, wherein step b includes measuring the control parameter and then comparing the control parameter to said pre-selected value.
15. **(Currently amended)** An electronic device, comprising:
  - a) at least one semiconductor chip containing a controlled phase locked loop system that includes an oscillator responsive to a control parameter and at least a portion of a control system adapted for controlling said oscillator at each of a plurality of target frequencies, said control system comprising:

- i) a plurality of sources for providing a plurality of operating parameters; and
- ii) at least one state machine operatively connected to said plurality of sources, said at least one state machine adapted for substantially re-centering said control parameter relative to each of said plurality of target frequencies as a function of said plurality of operating parameters.

16. (Original) An electronic device according to claim 15, further comprising a measuring device adapted for comparing said control parameter to a pre-selected value, said measuring device operatively providing a comparison indicator to said at least one state machine adapted for substantially centering said control parameter as a function of said comparison indicator.
17. (Original) An electronic device according to claim 15, wherein said semiconductor device further comprises a loop filter operatively connected to said oscillator and a comparator operatively connected between said loop filter and said at least one state machine for use in substantially centering said control parameter.
18. (Original) An electronic device according to claim 15, wherein said controlled oscillator system has a topology and said at least one state machine dynamically changes said topology so as to substantially center said control parameter.
19. (Original) An electronic device according to claim 18; wherein said oscillator is a multi-stage oscillator having a plurality of stage modes and said at least one state machine changes said topology at least in part by changing said oscillator among said plurality of stage modes.
20. (Original) An electronic device according to claim 15, further comprising a power-on-reset history buffer for storing a subset of said plurality of operating parameters, said at least one state machine utilizing said subset during a warm start to substantially center said control parameter.

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